AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (Canceled)

Claim 8. (Currently Amended) ~~The apparatus of Claim 7,~~ An apparatus for XDSL communication of data between a network and subscribers coupled to corresponding subscriber lines, and the apparatus comprising:

at least one analog front end (AFE) coupled to a first set of the subscriber lines supporting a first set of communication channels, and the at least one AFE for converting analog communications from the first set of subscriber lines to corresponding upstream channels of data, and for converting corresponding downstream channels of data into analog communications to the first set of subscriber lines; and the at least one AFE further including:

- a plurality of modules coupled to one another to form both a transmit path for packetized conversion of data packets corresponding with downstream channels of data from the network into analog communications and a receive path for converting analog communications from the subscribers to data packets corresponding with upstream channels of data from the subscribers; and
- buffers between selected ones of the plurality of modules of the transmit path and the receive path for buffering downstream and upstream data packets to allow pipelined processing by selected ones of the plurality of

modules on the transmit path and receive path of successive downstream and upstream data packets; and

- wherein selected successive packets within the transmit path and receive path pipelines of the at least a first AFE, exhibit different XDSL protocols and/or line codes; and
- wherein further selected ones of the plurality of modules vary the processing of each of the selected successive packets to correspond with the corresponding XDSL protocol and line code~~.~~ ; and

at least one digital signal processor (DSP) coupled to a network and the at least one DSP for processing downstream channels of data from the network to the subscribers and for processing upstream channels of data from the subscribers to the network.

Claims 9-10 (Canceled)

Claim 11. (Currently Amended) ~~The apparatus of Claim 6,~~ An apparatus for distributed XDSL communication of data between a network and subscribers coupled to corresponding subscriber lines, and the apparatus comprising:

at least one analog front end (AFE) coupled to a first set of the subscriber lines supporting a first set of communication channels and the at least one AFE for converting analog communications from the first set of subscriber lines to corresponding upstream channels of data, and for converting corresponding downstream channels of data into analog communications to corresponding ones of the first set of subscriber lines;

a first DSP and a second DSP each coupled to the least one AFE and to the network ~~and coupled via corresponding I/O interfaces with the at least one AFE~~ ; and

the first and second DSP forming a logical DSP server for the at least one ~~first~~ AFE for processing downstream channels of data from the network to the subscribers and for processing upstream channels of data from the subscribers to the network.

Claim 12-13 (Canceled)

Claim 14. (Currently Amended) ~~The apparatus of Claim 13,~~ An apparatus for XDSL communication of data between a network and subscribers coupled to corresponding subscriber lines, and the apparatus comprising:

at least one analog front end (AFE) coupled to at least one of the subscriber lines and the at least one AFE for converting analog communications from the at least one subscriber line to a corresponding upstream channel of data, and for converting a corresponding downstream channel of data into analog communications to the at least one of the subscriber lines;

at least one digital signal processor (DSP) coupled to a network and the at least one DSP for processing downstream channels of data from the network to the subscribers and for processing upstream channels of data from the subscribers to the network; and the at least one DSP including:

- a plurality of modules coupled to one another to form both a transmit path for packet processing of downstream channels of data from the network and a receive path for packet processing of upstream channels of data from the subscribers to the network; and
- buffers between selected ones of the plurality of modules of the transmit path and the receive path for buffering downstream and upstream data packets to allow pipelined processing by selected modules on the transmit path and receive path of successive downstream and upstream data packets; and

- wherein selected successive packets within the transmit path and receive path pipelines respectively of the at least one DSP, exhibit different XDSL protocols and/or line codes; and

- wherein further selected ones of the plurality of modules vary the processing of each of the selected successive packets to correspond with the corresponding XDSL protocol and line code.

Claim 15. (Canceled)

Claim 16. (Currently Amended) An apparatus for ~~distributed~~ XDSL communication of data between a digital signal processor (DSP) and subscribers coupled to corresponding subscriber lines, and the apparatus comprising:

a plurality modules coupled to one another to form both a transmit path and a receive path for an analog front end (AFE), and the transmit path for packetized conversion of downstream data packets corresponding with downstream channels of data from the DSP into analog communications on corresponding subscriber lines and a receive path for converting analog communications from the corresponding subscriber lines to upstream data packets corresponding with upstream channels of data from the subscribers; and

buffers between selected ones of the plurality of modules of the transmit path and the receive path for buffering downstream and upstream data packets to allow pipelined processing by selected ones of the plurality of modules on the transmit path and receive path of successive downstream and upstream data packets~~.~~ ; and

- wherein selected successive packets within the transmit path and receive path pipelines of the AFE, exhibit different XDSL protocols and/or line codes; and

- wherein further selected ones of the plurality of modules vary the processing of each of the selected successive packets to correspond with the corresponding XDSL protocol and line code.

Claim 17. (Currently Amended) An apparatus for ~~distributed~~ XDSL communication of data between subscribers coupled across subscriber lines with at least one analog front end (AFE) and a network, and the apparatus comprising:

a plurality modules coupled to one another to form both a transmit path and a receive path for a digital signal processor (DSP), and the transmit path for packetized processing of downstream data packets corresponding with downstream channels of data from the network to the at least one AFE and a receive path for processing upstream data packets corresponding with upstream channels of data from the at least one AFE; and

buffers between selected ones of the plurality of modules of the transmit path and the receive path for buffering downstream and upstream data packets to allow pipelined processing by selected ones of the plurality of modules on the transmit path and receive path of successive downstream and upstream data packets~~.~~; and

- wherein selected successive packets within the transmit path and receive path pipelines respectively of the at least one DSP, exhibit different XDSL protocols and/or line codes; and
- wherein further selected ones of the plurality of modules vary the processing of each of the selected successive packets to correspond with the corresponding XDSL protocol and line code.

Claim 18. (Currently Amended) A method for ~~distributed~~ XDSL communication of data between a network and subscribers coupled to corresponding subscriber lines, and the method comprising:

~~converting analog communications from the at least one subscriber line to a corresponding upstream channel of digitized data, and a corresponding downstream channel of digitized data into analog communications to the at least one of the subscriber lines;~~ coupling a plurality of modules to one another to form both a transmit path and a receive path, and the transmit path for packetized processing of downstream data packets corresponding with downstream channels of data from the network to the subscribers and a receive path for processing upstream data packets corresponding with upstream channels of data from the subscribers;

~~processing downstream channels of data from the network to the subscribers and upstream channels of digitized data from the subscribers to the network; and~~

~~packetizing the digitized data into upstream and downstream packets with headers for correlating each upstream and downstream packet both with a communication channel and with a targeted one of the converting and processing acts.~~

buffering data packets between selected ones of the plurality of modules of the transmit path and the receive path to allow pipelined processing by selected ones of the plurality of modules on the transmit path and the receive path of successive downstream and upstream data packets; and

- wherein selected successive packets within the transmit path and receive path pipelines respectively, exhibit different XDSL protocols and/or line codes; and
- wherein further selected ones of the plurality of modules vary the processing of each of the selected successive packets to correspond with the corresponding XDSL protocol and line code.

Claims 19-20. (Canceled)

Claim 21. A means for ~~distributed~~ XDSL communication of data between a network and subscribers coupled to corresponding subscriber lines, and the means comprising:

~~means for converting analog communications from the at least one subscriber line to a corresponding upstream channel of digitized data, and a corresponding downstream channel of digitized data into analog communications to the at least one of the subscriber lines;~~ modular means for forming both a transmit path and a receive path, and the transmit path for packetized processing of downstream data packets corresponding with downstream channels of data from the network to the subscribers and a receive path for processing upstream data packets corresponding with upstream channels of data from the subscribers;

~~means for processing downstream channels of data from the network to the subscribers and upstream channels of digitized data from the subscribers to the network; and~~

~~means for packetizing the digitized data into upstream and downstream packets with headers for correlating each upstream and downstream packet both with a communication channel and with a targeted one of the means for converting and the means for processing.~~

means for buffering data packets between selected ones of the modular means for forming the transmit path and the receive path to allow pipelined processing by selected ones of the modular means on the transmit path and the receive path of successive downstream and upstream data packets; and

- wherein selected successive packets within the transmit path and receive path pipelines respectively, exhibit different XDSL protocols and/or line codes; and

- wherein further selected ones of the modular means vary the processing of each of the selected successive packets to correspond with the corresponding XDSL protocol and line code.

Claim 22. (Canceled)